## WHAT IS CLAIMED IS:

- 1. A coating liquid for forming insulating film comprising (A) and (B), wherein a water content in the coating liquid is not more than 1% by weight:
- (A): a heat-reactive nonpolar compound or polymer thereof, wherein the heat-reactive nonpolar compound is selected from the group consisting of a compound having less than two carbon-carbon double bonds, a compound having not less than two carbon-carbon triple bonds, and a compound having at least one carbon-carbon double bond and at least one carbon-carbon triple bond,
- (B): at least one compound selected from the group consisting of silane compounds represented by following formulae(1) to (3):

$$\begin{pmatrix} R_{2}^{1} N - X \end{pmatrix}_{n} \begin{pmatrix} R_{3}^{3} \end{pmatrix}_{4-n-m} \begin{pmatrix} R_{2}^{3} N - X \end{pmatrix}_{m}$$

$$(1)$$

(wherein,  $R^1$  and  $R^2$  independently represent hydrogen atoms, alkyl group having 1 to 4 carbon atoms or aryl group having 6 to 20 carbon atoms,  $R^3$  represents alkyl group having 1 to 4 carbon atoms or aryl group that may be substituted with alkyl group having 1 to 3 carbon atoms,  $R^4$  represents alkyl group having 1 to 4 carbon atoms, acyl group having 1 to 4 carbon atoms or

aryl group having 6 to 20 carbon atoms, X represents bivalent group, n and m is integers of from 1 to 3, providing that n+m is not more than 4),

$$\begin{pmatrix}
R^{5} \\
6C = N - X - Si - (O-R^{4})
\end{pmatrix}_{m}$$
(2)

(wherein,  $R^3$ ,  $R^4$ , n and m are as defined above,  $R^5$  and  $R^6$  independently represent hydrogen atom ormonovalent organic group, providing that both  $R^5$  and  $R^6$  are not hydrogen atoms), and

$$\left(\begin{array}{c}
R^{7} \\
R^{7} \\
R^{7} \\
R^{3} \\
Si \\
C - R^{4}
\right)_{m}$$
(3)

(wherein,  $R^3$ ,  $R^4$ , n and m are as defined above,  $R^7$  represents alkylene group having 3 to 8 carbon atoms).

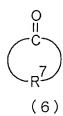
2. A coating liquid according to claim 1, wherein the compound of formula (1) is a compound of formula (4):

 $(R^3, R^4, n \text{ and } m \text{ are as defined above}).$ 

- 3. A coating liquid according to claim 1 or 2, wherein the compound of formula (4) is at least one selected from the group consisting of 2-aminoethyltrimethoxysilane,
  2-aminoethyltriethoxysilane, 3-aminopropyltrimethoxysilane,
  3-aminopropyltriethoxysilane, 2-aminoethyltriacetoxysilane,
  3-aminopropyltriacetoxysilane.
- 4. A coating liquid according to claim 1, wherein a compound of formula (2) or formula (3) is obtained by condensation of the compound of formula (4) with a compound of formula (5) or formula (6):

(5)

(wherein,  $R^5$  and  $R^6$  are as defined above), and



(wherein,  $R^7$  is as defined above).

5. A coating liquid according to claim 4, wherein the

compound of formula (5) or formula (6) is a compound with boiling point not more than 250°C under atmospheric pressure.

- 6. A coating liquid according to claim 4, wherein the compound of formula (5) is at least one selected from the group consisting of methylethylketone, 2-butanone, 2-pentanone, 3-pentanone, methylbutylketone, methylisobutylketone, 2-heptanone, 3-heptanone, acetylacetone.
- 7. The coating liquid according to claim 1, wherein the amount of (B) is from 0.01 to 10% by weight to (A).
- 8. A coating liquid according to claim 1, wherein (A) is a heat-reactive nonpolar compound having adamantane skeleton or a polymer of the heat-reactive nonpolar compound having adamantane skeleton.
- 9. A coating liquid according to claim 8, wherein (A) is a compound of formula (7) or a polymer of the compound of formula (7):

$$\left[Ar + \left(R^{8}\right)_{x}\right]_{y}$$

(wherein, Ar represents a group having an aromatic ring, R<sup>8</sup>

represents a group represented by formula (8) or formula (9), x represents an integer of from 1 to 3, wherein, when x is not less than 2,  $R^8$  may be same or different, y represents an integer of from 1 to 3, wherein, when y is not less than 2, Ar and  $R^8$  may be same or different,  $x \times y$  is an integer of from 2 to 9),

$$C = C \qquad Q^{2}$$

$$Q^{3}$$

$$Q^{3}$$

(wherein, each of  $Q^1$  to  $Q^3$  independently represents hydrogen atom, alkyl group having 1 to 4 carbon atoms, alkenyl group having 2 to 4 carbon atoms, alkynyl group having 2 to 4 carbon atoms, or phenyl group), and

$$---$$
C $\equiv$ C $--$ Q<sup>4</sup>

(wherein,  $Q^4$  represents hydrogen atom, alkyl group having 1 to 4 carbon atoms, alkenyl group having 2 to 4 carbon atoms, alkynyl group having 2 to 4 carbon atoms, or phenyl group).

- 10. A coating liquid according to claim 9, wherein the compound of formula (7) is a compound having Ar that bonds to methine group of adamantane skeleton.
  - 11. A coating liquid according to claim 9 or 10, wherein

 $R^8$  is a group of formula (9).

- 12. A coating liquid according to claim 9, wherein  $\mathbb{R}^8$  is ethynyl group or phenylethynyl group.
- 13. A method for forming an insulating film comprising coating a substrate with the coating liquid according to claim 1, baking at 80 to 250°C under atmospheric pressure in air, and heat-curing at 250 to 400°C.
- 14. An insulating film obtained by the method for forming according to claim 13.